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Commentary

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The Health Papers

Funding Public Provision of Private Health

The Case for a Copayment Contribution through the Tax System

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In this issue...

A new approach to the funding of the public provision of health care insurance through a copayment contribution scheme, by treating a limited portion of an individual's total health care costs as consumption, akin to food and shelter, which should be reimbursed to government annually.

The Study in Brief

Canadians deserve a public health care system that is funded both efficiently and fairly. Yet the current financing of health care is neither. It is inefficient in that financing does not encourage users and providers of health care to be accountable for the economic benefits and costs of services. And it is unfair in that usage of health care services plays no role in determining the individual's contribution to operating it.

This *Commentary* proposes a carefully structured system for reimbursing part of these costs to government through an individual's income tax return. The justification for this reimbursement is based on the idea that the expenditure of a modest portion of a person's income on health care should be treated as a normal consumption expenditure, akin to food and shelter costs, for which the beneficiary ultimately should be responsible. The higher the burden an individual imposes on the system, the higher would be his or her contribution. At the same time, individual contributions would be capped at a maximum of 3 percent of annual income so that no one is deprived of health care services for lack of money. To further guarantee that the proposal did not pose a great burden on the poor, families with an annual income lower than $10,000 would not be required to make any contribution.

It is estimated that 62 percent of Canadians would pay the maximum contribution of 3 percent of their income. It is further estimated that, had this scheme been in place in 2000, it would have led to significant cost savings of $6.3 billion, which could have been reinvested in the health care system to improve the level of service. The estimated $6.6 billion in revenue that would have been generated from collecting individual contributions in 2000 could have been used to reduce personal income tax rates, thereby giving Canadians more control over their overall tax bill.

This proposal is flexible and cost efficient in that it could be administered through the existing provincial tax system. Specific costs for specific health care services are, however, currently not available and would have to be developed in order to implement the proposal. While this would require a one-time public expense, the benefits of establishing this set of costs would contribute to the accountability and transparency of Canada's health care system.

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This *Commentary* outlines a new approach to the funding of the public provision of health care insurance in Canada. In keeping with the principles of ensuring efficiency and equity in Canada's tax system, our proposal would provide a source of health-care-related provincial revenues that could replace some of the general taxes now used to fund health care. The proposed revenue source is a copayment contribution scheme or variable premium[1] that would be based on the user-pay principle: those who use the system contribute in part to the costs of operating the service. Unlike most user-pay proposals, however, the one we propose would not impose flat-rate user fees, which deter those with low incomes from availing themselves of necessary health care.

When public medical insurance was established in Canada in the 1960s, it did not intend for all services to be covered by governments (Kent 2000). Families should be responsible for a certain portion of health care costs, subject to a limitation; that portion would be treated as a normal consumption expenditure, similar to food and shelter, to be borne by the consumer. Imposing some charges for the use of services would have two important benefits: people would be encouraged to take preventive care, and waiting times, which impose nonmonetary costs on the sick, would be reduced. Further, general revenues would still be used to fund a major portion of the costs since our scheme would only partially fund public health care insurance. To ensure that low-income families do not bear a large burden, the contribution would be limited to a relatively small percentage of annual family income above $10,000. Provincial variations of our scheme could be considered, to make it more consistent with basic provincial personal income tax (PIT) exemption levels and other provincial tax provisions.

Our proposed contribution scheme could lead to significant efficiency and administrative gains. Currently, there is a lack of good accounting information on the costs of operating the health system. Thus, one immediate benefit would be improved accountability. To make our proposal work, provincial health authorities would need to report qualifying expenditures on behalf of family members. Another benefit would be improved user awareness of health care benefits and costs. The most economical way to administer the contribution would be as part of the PIT system, with the federal government agreeing to collect it pursuant to the Tax Collection Agreements with all provinces (except Quebec, which would collect its own copayment). By relying less on taxes that distort the economy, a copayment contribution scheme would improve the performance of the economy.[2]

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1 The Mazankowski report (2001) refers to variable premiums that would be related to income levels and health insurance costs provided by government.

2 Estimates of the economic costs of taxation vary, but Dahlby (1994) suggests that some taxes, such as personal income surtaxes, can result in economic costs that are even greater than the amount of revenues collected. As a benchmark, we assume that the economic cost of raising each dollar of personal income tax is 30 cents.

The Canadian Institute for Health Information (CIHI) estimates that, in fiscal year 2001/02, provincial and territorial expenditures on hospitals, physician services, drugs, and other expenditures totaled $69.3 billion, or about 6.5 percent of gross domestic product (GDP). Most of this health care public expenditure is funded by general tax levies, including income, sales, and payroll taxes. Two provinces, Alberta and British Columbia, levy income-tested health care insurance premiums on individuals and families. These premiums cover a small portion of the cost of health care services in these provinces.[3] Four provinces — Manitoba, Ontario, Quebec, and Newfoundland — levy employer-paid payroll taxes on employee compensation to fund health care and postsecondary education. None of these levies is explicitly related to the costs users incur with respect to health care programs. Moreover, unlike contributions to the Canada/Quebec Pension Plan (CPP/QPP) and employment insurance, the premiums and taxes are set independently of health care expenditures, since the amounts are paid into consolidated government revenue accounts.

It is far from clear that the use of general revenues, which can impose substantial economic distortions on the economy, is Canada's best approach to funding public health care insurance.

It is far from clear that the use of general revenues, which can impose substantial economic distortions on the economy, is Canada's best approach to funding public health care insurance.[4] In funding public services, the tax system is most efficient and fair when governments rely significantly on user-related or benefit taxes.[5] Efficiency is enhanced since the users of the system, in their personal demand for the service, will knowingly contribute toward the costs they incur. In addition, health authorities will be more accountable for their decisions. Fairness is improved because individuals who consume public services contribute more to their cost. By shifting to a more efficient and fairer source of revenue, one could generate a "double-dividend": the provision of better-priced health practices, and relief from distortionary taxes.[6]

The idea of taxing health care benefits is not new. Tom Kent (2000) has argued that health care benefits should be included as part of income and subject to tax. One criticism of this approach is that health care expenditures should then be deducted as an expense to cover living costs, thus fully offsetting the inclusion of income. Further, even if it were considered appropriate to tax government-provided health care benefits, it would be necessary to impose limits to avoid the possibility that families will owe a large tax payment on such benefits. Spending and income limitations, therefore, would be required so that the amount of benefit did not exceed some proportion of taxable income.

Our proposed contribution scheme is based on a different principle. Rather than relying exclusively on general revenues, public health care costs, which must be funded by taxes and fees levied by governments, should be covered, in part, by a contribution related to the use of the system. The contribution would be limited

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3 In 2000, Alberta levied $673 million of health care insurance premiums, funding 11 percent of provincial health care expenditures. In British Columbia, health premiums totaled $880 million, or 10 percent of provincial health care expenditures. Lee (2000) provides a description of the history of health premiums.

4 Gordon, Mintz, and Chen (1998) outline a contribution scheme in which low-income individuals would not pay a tax on health care benefits.

5 See Technical Committee on Business Taxation (1998); Mintz (2001); and Bird and Tsiopoulos (1997).

6 A similar argument has been made with respect to environmental taxation: a double dividend could arise from better-priced environmental practices and relief from distortionary taxes.

A certain proportion of an individual's expenditures on heath care ought to be regarded as a basic consumption expenditure, akin to food and shelter.

according to two factors: the amount of public expenditures made on behalf of a family, and the family's income. In other words, our rationale is that a certain proportion of an individual's expenditures on heath care ought to be regarded as a basic consumption expenditure, akin to food and shelter. Accordingly, that portion, or a fraction of it, should be reimbursed to the government. The rest of the health care cost remains the proper responsibility of the government insurance plan.

Basic Elements of a Copayment Health Insurance Contribution

To understand the basic principles of our proposal, it is useful to begin with an elaboration of the three principles involved in health care insurance, which can be summed up by the following questions. First, why, in the absence of government, do people insure themselves against health care expenses rather than pay out sums as needed? Second, why does government get involved in the provision of health care insurance? And third, how are public health insurance costs best financed?

Why Health Care Insurance?

In practice, the role of any kind of insurance is to pool the risks individuals face, where the chance of each person's facing a contingent liability may be small but the costs incurred if that contingency occurs could be large. In the area of health, that chance is relatively small and those costs could be large. An insurance agency is able to pool risks across a population by collecting a premium from each insured member of a plan and covering the costs of those members who incur the liability. The individual pays a premium that reflects the expected cost of benefits paid to the insured population. When risks are fully insured, individuals simply pay a given fee to cover all potential risks. For example, under full insurance, if the chance of a person's becoming ill in a year is 1 percent and the average annual cost per illness is $20,000, the insurance premium set to cover insured risks would be $200 for each member of the plan, permitting the plan to operate without a loss.[7]

Insurance is provided in many countries to cover not just health care liabilities, but also automobile accidents, disability, fire and property damage, and a host of other contingencies that families and individuals face.

Insurance rarely insures risks fully, however, since it could result in higher claims being assessed. One reason for such higher losses is that people may take less care to prevent risks; for example, they may smoke or engage in other high-risk activity. This attitude is an example of what is referred to as the "moral hazard" problem (Arrow 1970).[8]

To avoid the negative consequences of moral hazard, insurers adjust insurance policies to provide a "break" for those who are less likely to claim benefits. Contract provisions are adjusted so that people who impose greater liabilities on the health

7 This simple illustration assumes that the rates are actuarially fair and that there are no transaction costs.

8 Another source of inefficiency related to insurance markets is adverse selection, when it is difficult to separate high- from low-risk insured persons (see Akerlof 1970). Adverse selection was not a major consideration in our proposal.

care system pay higher contributions or receive fewer benefits. To encourage better preventive care and avoid unnecessary costs, insurers use instruments that provide less-than-full insurance at a reasonable cost as a way of sorting the population by good and bad risks. These policies include deductibles (only expenditures greater than the deductible amount are covered), bonus payments (monetary rewards are provided for those who make few or no claims), and experience-rated premiums that are adjusted according to a person's claims history.

Publicly Provided Health Insurance and Incentives

Governments involve themselves in the provision of health insurance for two reasons. First, since health care is a significant cost for low-income families, governments provide subsidies for the purchase of private insurance (often mandated for employers) or provide public insurance directly. Thus, one role of government-mandated or publicly provided basic insurance programs is to provide access to insurance for the whole population. Second, governments play a role in health insurance markets if high-risk persons are unable to buy insurance and are thus unable to cope with the costs of a major illness.[9] Governments may then mandate the provision of insurance for the broad population.

Publicly provided basic insurance programs provide access to insurance for the whole population. They also play a role in health insurance markets if high-risk persons are unable to buy insurance and are thus unable to cope with the costs of a major illness.

Yet, even though a government may provide funding for health insurance, full insurance of risks is inappropriate. The moral-hazard problem results in higher losses incurred by the publicly operated insurance plan, since individuals take less care to avoid health risks and tend to overuse the system.[10] Thus, as in the case of private provision of insurance, it is appropriate that governments use incentives such as copayments to reduce the impact of moral hazard on the costs of the program (Breyer and Haufler 2000).

Canadian governments have used incentive mechanisms for social insurance programs in a number of contexts. Drug programs in most provinces have copayments or deductibles for claims made by the insured. CPP/QPP benefits and contributions are related to years of work and employee earnings. Most provincial governments provide workers' compensation using "experience-rating" techniques: employer contributions are adjusted upward for those who make greater claims on the system. The United States uses experience-rating techniques for an employer's unemployment insurance contributions, which are based on claims by its employees.

The Failings of Canada's Financing Approach to Public Health Costs

In Canada, current government practice is to fund health care from general revenues, payroll taxes, and income-tested premiums unrelated to how health care services are

9 The rationale of seeing that even high-risk individuals are insured is related not just to moral-hazard issues, but also to the inability of private competitive insurers to delineate between high- and low-risk individuals.

10 Better health status is an obvious incentive for avoiding health risks. Adding a monetary cost to the burden an individual bears would provide another incentive for avoiding health risks and should, at the margin, contribute to reducing risky behavior.

used.[11] Since tax burdens vary from one individual to another, the current financing method for health care is akin to an insurance premium of an amount that varies according to the taxpayer's income, consumption, or other attributes. There is no reward for those who avoid health care costs, as there would be under a bonus scheme. There is no reduction in the amounts claimed on the part of doctors and patients who may take less care in avoiding health care risks. And payments are made irrespective of the individual's claims history.

Under the current health care system, there is no reward for those who avoid health care costs.

For publicly provided health care services, Canadians should seek a financing approach that improves the overall objectives of the tax system. The primary role of the tax system is to fund public expenditures, including public health insurance. Two important principles for optimal tax financing of public expenditures are well known: efficiency and fairness.

Efficiency. An efficient tax system has a minimal impact on the allocation of resources in the economy. Further, a tax related to benefits taxpayers receive from public programs is efficient since users can compare the incremental costs of operating the program with the incremental gains that result from added expenditures on it.

Under Canada's existing financing system, efficiency is impaired since neither medical service providers nor patients see any connection between the benefits received from public health care and the costs of providing the services. Empirical evidence shows that a 10 percent increase in prices charged for health care can reduce health care use between 1.7 and 7 percent.[12] Accountability mechanisms could improve if health care providers and patients knew that the use of health care services meant that a patient would contribute more to the system. The current financing approach provides no opportunity for taxpayers to compare the true costs with the benefits of the system.

Fairness. A fair tax system recognizes that people in similar economic circumstances should pay similar amounts of tax, and those in different economic circumstances should pay different amounts of tax. When consumption levels of public services vary among people in otherwise similar economic circumstances, then fairness is improved if contributions are related to the cost of those services.

Fairness is improved further if individuals who may assume health risks that result in greater health care expenditures contribute more to the costs of the health care system. Some have argued that it is unfair to impose a "tax on the sick" (Lewis 1998), but this statement is based on the assumption that all health care

11 In this country, governments fund 99 percent of all expenditures on physicians' services and 92 percent of total hospital expenditures.

12 Estimates of demand elasticities for health care vary across type of service (Cameron et al. 1988) and income class (Tuohy, Flood, and Stabile 2001, 13). Ellis (1986) finds that ambulatory mental health care use falls by almost one-half when services are priced at full cost rather than provided free. Stabile (2001) suggests that the demand for private health care insurance would fall by 4 percent if prices rose by 10 percent. The current tax exemption given for employer-paid health insurance (recently extended to self-employed individuals) increases not only supplemental health insurance demand (by 20 percent), but also publicly funded health care costs (by 10 percent). Gruber (2001) provides a survey on the impact of prices on the demand for health insurance.

needs are unrelated to a person's actions. Although it is often the case that luck or heredity affects a person's health, personal preventive actions also have some influence on health outcomes. On the other hand, some individuals visit physicians and hospitals more often than they should since no direct monetary cost is incurred for the visit.[13] This practice could lead to longer waiting times for all users, including those who are in more urgent need of treatment. Additional incentives for eliminating unnecessary visits to physicians and hospitals would reduce waiting times and further ensure that those who need treatment the most receive it first. It would, therefore, be fair to provide some incentives in a social insurance system to reduce the moral-hazard problem. The incentive in a contribution system is the portion of the costs borne by the individuals who use the system.

Before the adoption of medicare in the 1960s, a substantial portion of health care expenditures was financed out of the pockets of Canadians. The federal government provided a medical expense deduction for income tax purposes for expenditures in excess of the lesser of 3 percent of income or $1,637.[14] In other words, the policy recognizes that a portion of health care expenditures is similar to other types of consumption expenditures Canadians make — namely, those on food, housing, and clothing. These expenditures should not be deducted from income for determining personal income tax liability.

Why Not Publicly Administered User Fees?

To this point, our discussion has established a case for financing health care using some user-related copayment system. One clear approach to putting the user-pay principle into practice is for governments to allow user fees to be charged for medical services. Significant efficiency gains could be achieved if medical service providers were to charge their own, competitively priced fees for services — that is, user fees would become a pricing mechanism for health care services. In this case, medical services would become privatized, and people could buy insurance to cover their fees. User fees that cover the costs of the public system would be visible to patients and would have a direct impact on health care use (see, for example, Ellis 1986).

Significant efficiency gains could be achieved if medical service providers were to charge their own, competitively priced fees for services.

Although a system of user fees competitively determined by providers would be more efficient and fairer than the existing financing approach, it would suffer from one important problem. User fees impose a greater burden on the poor and so may discourage them from seeking health care. From a financial perspective, this could lead to higher health expenditures later in life. On a related note, if user fees were used only for, say, preventive services (such as checkups and tests), people might impose high costs on the medical system by avoiding expenditures on prevention. Governments could offset user fees with income tax credits, but the upfront payment of fees (with a tax credit given at a later time) could still discourage the poor from seeking medical help.

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13 Asking a physician to treat a common cold, for which medications are available over the counter, may be one example of an unnecessary visit.

14 This principle still exists, although its significance is much less now that publicly provided health insurance covers such a large portion of health care costs.

An Outline of Our Basic Proposal

Our proposal for a copayment contribution system operated through the tax system is consistent with good health care and tax policies.

Our proposal for a copayment contribution system operated through the tax system is consistent with good health care and tax policies. The objectives of efficiency and fairness are the underpinnings of a contribution scheme that would include the following elements:

- Users of health care services should pay a contribution that is related to the cost of the services they use.
- The contribution should not be a burden on individuals whose incomes are inadequate to cover the costs of the services they use.
- The system should not incur unnecessary administrative and compliance costs.

According to the fairness principle, a family should pay 100 percent of the public health care costs it incurs, subject to an income limitation.[15] As we shall discuss, many individuals would be subject to an income limitation constraint, which would reduce the efficiency gains that would be achieved by encouraging better health practices in order to avoid risk. To create greater efficiency gains, we lowered the proportion of health care costs subject to payment, so that fewer families would be at the income limit in determining the amount to be paid. For the same reason, a progressive rate structure for the income limitation (for example, 1 percent of income between $10,000 and $30,000; 5 percent of income above $30,000) would erode the efficiency of the copayment system. Under a progressive rate structure, more people at the middle- and lower-income levels would be subject to the maximum, and higher-income individuals who are at the income limit would face much higher marginal personal tax rates on income. A flat rate schedule for the income limitation, unlike the progressive schedule, maximizes efficiency gains.

Our basic proposal for a copayment contribution system to fund health care would achieve the objectives of efficiency and fairness in several ways. A contribution would be assessed on 40 percent of the cost of health care services, and the maximum that a family would pay in a year would be 3 percent of any annual income above $10,000. Thus, a family with an annual income of $10,000 or less would continue to benefit from free health care services. A family with an annual income of, say, $50,000, whose total visits to physicians and hospitals and other health-related institutions had cost government $2,000 during the year would contribute $800 (40 percent of $2,000 in expenditures). A family with the same annual income but with a $10,000 health care bill would contribute $1,200 — the lesser of 40 percent of $10,000 or 3 percent of annual income, excluding the first $10,000.[16]

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15 We modeled several forms, including a flat rate of 3 percent and a progressive-rate schedule.

16 Our analysis includes only visits and calls to physicians and visits/nights in hospitals or other institutions. This was dictated partly by data availability and partly by our desire to include only these items and not, for example, the cost of prescription drugs, for which a copayment system already exists for most people who buy them.

How Much Would We Pay?

Using survey data on health care utilization rates by age and income group, as well as data on total public spending on health care, we can estimate the contribution of the "typical" or average family in a given income group.[17] Because the most recent comprehensive health survey was conducted in 1998, our detailed estimates are given for that year. Table 1 shows "typical" contributions as well as the percent of "typical" families that would make a contribution equal to the proposed maximum. A "typical" family is defined as one that, if it uses health care services in a year, spends an average amount — according to information we received on hospital and physician services provided to different income groups. In principle, within a group, health care expenditures per person will vary substantially from the average but we do not have data to measure this distribution.

Sixty-two percent of all families are subject to the maximum and would therefore pay a contribution equal to 3 percent of their annual income.

The table shows that 62 percent of all families are subject to the maximum and would therefore pay a contribution equal to 3 percent of their annual income. Families and individuals with an annual income below $10,000 would not make any contributions and would be unaffected by our proposal. Moving up the income ladder to between $10,000 and $30,000, we see that many individuals and families in this group would make a contribution that is equal to their maximum — 3 percent of any income above $10,000. On average, this contribution would amount to $281 a year, so government would still cover the lion's share of their health care costs out of general tax revenues. As many as 47 percent of "typical" families and individuals with an annual income between $30,000 and $60,000 would pay the maximum contribution, and the average contribution in this income group would be $760. Further, all families with at least one elderly individual (that is, those who incur the highest health care costs in the group), would still pay the maximum contribution, which is based solely on their income. Most families with an average annual income between $60,000 and $100,000 would find that their total expenditures on health care would be less than 3 percent of their income, reduced by $10,000, with the result that their average annual contribution would be $942. It is only in the highest income group, which includes those earning more than $100,000, that we can see that all "typical" families and individuals, regardless of their age, would pay contributions that are less than 3 percent of their income, reduced by $10,000. For those with an annual income of six figures or more, the annual contribution would be, on average, $987.

The Appendix at the end of this study shows how contributions change when the 40 percent assessment level is changed to 20 percent and 60 percent. Applying 20 percent of the cost of health care would result in an average annual contribution of $335, while a 60 percent assessment level would result in an average annual contribution of $641.

How the System Would Be Administered

Under the current arrangement, a patient must present a government-issued health card every time he or she visits a physician or a hospital. Under our proposed

17 We used data from CIHI, the 1998 National Population Health Survey, and Statistics Canada's SPSD/M program. See the Appendix for more on our methodology.

Table 1: ***Health Care Contributions, by Census Family Category***

Census Family Category	Net Family Income					
	Less than $10,000	$10,000–30,000	$30,000–60,000	$60,000–100,000	More than $100,000	All Income Groups
	A. Average Contribution per Family ($)					
Married couple with no children	0	331	680	565	577	517
Married couple with young children	0	354	928	1,073	1,143	852
Married couple with only older children	0	327	889	994	1,073	891
Married couple, at least one is elderly	0	308	968	1,735	1,766	782
Single-parent family with young children	0	281	743	728	726	254
Single-parent family with only older children	0	309	816	960	973	574
Unattached, nonelderly individual	0	266	372	285	271	197
Unattached, elderly individual	0	204	921	1,492	948	227
All family categories	0	281	760	942	987	514
	B. % of "Typical" Families Paying the Maximum					
Married couple with no children	100	100	34	0	0	41
Married couple with young children	100	100	55	1	0	43
Married couple with only older children	100	100	45	0	0	25
Married couple, at least one is elderly	100	100	100	61	0	91
Single-parent family with young children	100	100	55	0	0	87
Single-parent family with only older children	100	100	60	14	0	69
Unattached, nonelderly individual	100	89	5	0	0	69
Unattached, elderly individual	100	100	100	37	0	98
All family categories	100	96	47	6	0	62

Note: For the definition of a "typical" family, see the text.
Source: Authors' calculations.

system, that same card would work like a credit card. At the end of each visit, the patient would sign a receipt that details the type and cost of the services received. Although signing a receipt does not have the psychological effect of making an actual payment, it is reasonable to expect this new procedure would provide sufficient incentives to encourage people to avoid unnecessary demands on the system and take better care of their health. Unlike a traditional credit card statement, a quarterly or annual T-H form would be sent to the family, which could then check that the amounts included on the form correspond with their receipts.

Privacy concerns arise when detailed medical information is sent through the mail. To address these concerns, receipts signed at the end of each visit could document information regarding the nature of the services, and the annual statement could include a numerical code that matches the information on a signed receipt.

Impact on Provincial Fiscal Balances

Our contribution scheme would affect provincial government revenues in two ways. First, the contributions would raise a certain amount of revenue based on the use of health care services. Second, any decreased level of health care use would save the public money.

If our scheme had been in place in 1998, an estimated $6.8 billion, or about 16 percent of total public spending on physicians and hospitals and other health-care-related institutions) would have been raised. Using total public expenditures on this sector as an index, we estimate that, in 2000, total contributions would have been $7.4 billion.

These figures do not take into account the expected drop in utilization rates. Faced with usage-based costs, users of the health care system would reduce, when possible, the number of visits they make to physicians and hospitals. This is mostly true for those families who would not "hit" the maximum payment level, since those who do pay the maximum would not pay for any additional health care services they consume. We use findings of other studies that estimate a drop of 17 percent in demand for health care services in response to a change in the price of health care from zero to some positive number. Our estimated contributions, assuming reductions in utilization rates, are shown in Table 2.[18] Contributions would then total $6.1 billion in 1998 as a result of reduced use of health care services (about $6.6 billion in 2000). This is a conservative figure, since we ignore the scenario in which some users are careful to avoid unnecessary procedures without knowing until the end of the year if they had reached the maximum according to the income limitation.

We estimate that total public expenditures on physicians and hospitals and other health-care-related institutions in 2000 would have fallen from $46.7 billion to $40.4 billion (13.5 percent) as a result of the reduction in use.

We estimate that total public expenditures on physicians and hospitals and other health-care-related institutions in 2000 would have fallen from $46.7 billion to $40.4 billion (13.5 percent) as a result of the reduction in use. Aside from yielding monetary savings, lower utilization rates would also benefit families who would be able to access medical services more quickly.

Comparing Tables 1 and 2, we see that the contributions of those in the lower income groups, particularly those of families with an annual income of less than $30,000, are almost unchanged. These families and individuals would still pay the maximum amount that is based on their income. But larger decreases in contributions would occur as one moves up the income ladder, with high-income users finding it worth their while to economize on visits to physicians and hospitals.

We suggest that the money raised from actual contributions ($6.6 billion in 2000) be used to reduce personal income taxes. The estimated $6.3 billion savings in public health care expenditure resulting from reduced use could then fund other health care priorities and address, at least to some extent, recent concerns about underfunding. People who are sick would thus receive better and timelier treatment.

Reducing Personal Income Taxes

Canada's marginal effective personal income tax rates rise to substantial levels, sometimes exceeding 70 percent for individuals and families with income-tested benefits (Poschmann and Richards 2000). The relative underperformance of the

18 The estimate is calculated by taking a conservatively estimated elasticity of demand for health care services (0.17), the quantity of health care services affected, and the increase in health care prices from zero to a positive value. Some families would reach the maximum payment level and face no extra cost for extra health care services they receive. We allow for that in our calculations. However, we do not allow for different price elasticities across income groups, and we recognize this as a limitation of our estimates.

Table 2: ***Health Care Contributions, by Census Family Category, Assuming Reductions in Usage Rates***

Census Family Category	Net Family Income					
	Less than $10,000	$10,000–30,000	$30,000–60,000	$60,000–100,000	More than $100,000	All Income Groups
	A. Average Contribution per Family ($)					
Married couple with no children	0	329	613	470	479	459
Married couple with young children	0	354	843	893	948	746
Married couple with only older children	0	327	802	825	891	763
Married couple, at least one is elderly	0	308	967	1,607	1,466	752
Single-parent family with young children	0	281	683	604	603	238
Single-parent family with only older children	0	309	767	828	808	530
Unattached, nonelderly individual	0	261	317	237	225	180
Unattached, elderly individual	0	204	913	1,271	787	221
All family categories	0	280	700	797	820	462
	B. % of "Typical" Families Paying the Maximum					
Married couple with no children	100	97	30	0	0	39
Married couple with young children	100	100	44	0	0	39
Married couple with only older children	100	100	42	0	0	24
Married couple, at least one is elderly	100	100	100	52	0	90
Single-parent family with young children	100	100	42	0	0	85
Single-parent family with only older children	100	100	52	8	0	65
Unattached, nonelderly individual	100	86	0	0	0	67
Unattached, elderly individual	100	100	88	0	0	96
All family categories	100	95	41	4	0	60

Notes: Assumes a 17 percent drop in the use of health care services for those not subject to the contribution ceiling.
For the definition of a "typical" family, see the text.
Source: Authors' calculations.

Canadian economy during the past two decades is to some extent a result of high marginal personal tax rates that discourage work effort, saving, and risk taking (Mintz 2001). Under our proposal of levying health care contributions without reducing marginal PIT rates, the marginal tax rate of an individual whose health care contribution hit the maximum would rise to 3 percent of contributory income (income above $10,000). We therefore believe that the money raised from health care contributions should be used to lower PIT rates.

One option is to make the proposal revenue neutral, which means that total tax revenues would be unchanged. Every dollar raised from contributions would be used to lower PIT rates. Those people not at the maximum of 3 percent of contributory income would see their aggregate marginal tax rates fall. Families or individuals at the maximum could experience some increase in marginal tax rates, although that increase would depend on how provinces adjusted their PIT schedules. The risk with revenue-neutral proposals such as this one, however, is that some taxpayers are bound to pay more and others less than before.

In sum, the benefits of our proposal would be a reduction in health care use and public expenditures, as well as greater control by individuals over their tax bill.

The nondiscretionary portion of the tax bill would be lower and a discretionary portion would be introduced through the levying of usage-based health care contributions.[19] Any other combination of lowering marginal tax rates while keeping some of the new revenue generated from contributions would have the additional benefit of new revenue, but would mean that some families or individuals pay more taxes.

Table 3 presents an overall picture of how much marginal PIT rates could be reduced on average.[20] In Newfoundland in 1998, for example, total health care contributions raised under our proposal would have been an estimated $90 million; total income tax payable was $535 million. Therefore, to keep total provincial government revenue unchanged, the PIT rate could be reduced on average from 8 percent to 6.7 percent, a decrease of 16.8 percent.

A Medical Allowance

A medical allowance would enable a family to receive free medical services, up to a limit, before the copayment charge or variable premium is applied.

One variation to consider is a medical allowance that would enable a family to receive free medical services, up to a limit, before the copayment charge or variable premium is applied. If the medical allowance is refundable so that the family receives unspent portions of the allowance, it would then operate much like a medical savings account.

The medical savings account is an option that would introduce greater accountability into and improve the efficiency of the health care system (Gratzer 1999). Essentially, it operates by giving individuals a fixed amount of money each year for visits to physicians and hospitals. Governments would provide coverage of any health care expenditure up to a certain amount, beyond which the individual would cover costs. Governments might even permit users to keep any unused portion of this amount. Some individuals, however, would incur health expenses above the specified amount; those with chronic conditions and the elderly, for example, might be unable to cover the extra expense. Thus, a more sophisticated system would see governments providing coverage up to a certain amount, with individuals covering a portion of additional costs up to a maximum level that might be based on income. Governments would thus cover expenditures over the maximum amount of health care expenses.

To provide a sense of the costs and benefits of such a medical allowance, we ran simulations using our base proposal, with the additional feature of a nonrefundable $500 allowance for each family. The nonrefundable allowance implies that individuals would be exempt on their first $500 of medical expenditures. Unlike the medical savings account, this system would not reimburse unspent amounts.[21] We found that, to raise the same level of $6.8 billion in total contributions (in 1998), before

19 This is true for those not subject to the maximum contribution level.

20 Marginal tax rates could be reduced substantially for some taxpayers if some marginal rates are not adjusted, such as those for low-income taxpayers who do not pay tax. The numbers reflect the 17 percent drop in health care use among those not subject to the maximum contribution.

21 If the allowance were refundable, then users who did not spend $500 would receive a rebate. However, the contribution system would raise less revenue unless further adjustments were made to the copayment amounts.

Table 3: ***Reducing Personal Income Taxes (PIT) Using Revenue Generated from the Health Contribution Program, 1998***

	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	All Provinces
Total actual health contributions *($ millions)*	90	25	178	145	1,412	2,455	219	187	596	822	6,128
Provincial PIT payable *($ millions)*	535	124	966	866	15,560	15,600	1,498	1,593	4,005	5,711	46,456
Health contribution as a share of provincial PIT *(%)*	16.8	20.4	18.4	16.8	9.1	15.7	14.6	11.7	14.9	14.4	13.2
Provincial PIT as a share of net income *(%)*	8.0	6.7	7.0	7.7	12.9	6.9	8.4	9.5	7.0	7.8	8.5
PIT net of contributions as a share of net income *(%)*	6.7	5.3	5.7	6.4	11.7	5.8	7.1	8.4	6.0	6.7	7.4

Source: Authors' calculations.

reduction in use, the assessment level would have to be raised from 40 percent to 54 percent. Then, taking reduction in use into account, total revenues raised would fall from $6.1 billion to $5.9 billion. The lower amount raised would mean a smaller reduction in personal income taxes. Our simulations also found that savings to the health care system resulting from reduced use would be about $70 million lower under a medical allowance approach than under our contribution system. Finally, when we compared our original proposal with the one that would provide a $500 allowance, we found that average contributions per family would be lower by $10 a year, on average, for families with an annual income between $10,000 and $30,000. Families with an annual income between $30,000 and $60,000 would actually see a $50 rise in their average contribution, which implies that the higher assessment level would outweigh the benefits of the $500 allowance. The increase in the annual contribution would be minor both for families with an annual income between $60,000 and $100,000 and for those with an annual income above $100,000 — $6 and $14 a year, respectively.

We conclude that, compared with a medical allowance scheme, our proposal would lead to greater efficiency gains and allow for a greater reduction in taxes.

Further, making the allowance refundable, as it would be under a medical savings account system, could have similar effects in reducing efficiency. Although those who spent less than the allowance would manage their medical services better, the refunds would reduce the amount of revenues received as predicted by our original proposal. To raise the revenue projected under our proposal, the copayment charge could be increased, but this would mean that more families would reach the maximum contribution level, thereby increasing the number of people facing higher marginal tax rates and lowering the efficiency gains allowed through reduced use of the public system.

In sum, both the nonrefundable and the refundable medical allowance options would result in reduced efficiency gains when compared with a system that provided no allowance at all.

Improved Accountability from Better Information

Our proposal requires that a set of fees for various health care services be available. Without one, there would be no way to calculate contributions. Because hospitals do not have detailed information on the costs of many services they provide, some resources would have to be directed toward calculating these costs. This task might involve a significant up-front cost, but the benefits of having such a fee schedule would extend well beyond our proposal. Among such benefits would be better monitoring of hospital costs and, therefore, a more efficient allocation of resources. Arguably, many of the current problems in the health care system might have been resolved had governments been able to compare costs and benefits more directly.

Some Other Issues

Our proposal offers the substantial benefits of cost savings in health care and a more efficient and fairer tax system.

Our proposal offers the substantial benefits of cost savings in health care and a more efficient and fairer tax system. Of course, several other issues would need to be considered.

Provincial variation in approaches. Our approach would accommodate provincial variations in determining the amount a family pays for health care. In principle, provinces could choose their own cost shares and limits on the amounts paid. Exemption levels could be based on provincial income tax systems. If contributions are collected through the income tax system, however, provinces (except for Quebec, which has its own PIT) would have to use the Tax Collection Agreements to obtain them. Given that the federal and provincial governments have come to an agreement to accept a common base with variations in credits and rates, they would need to consider the degree to which the contribution payable should follow a certain degree of uniformity. Some uniformity might be appropriate to ease administrative burdens and to provide a certain common standard for the provision of public health care, but provincial variations in contribution rates could encourage competition and innovation in the provision of health care services.

Administrative costs. We do not provide a measure of administrative costs for the contribution program. Using the income tax system to collect the contribution would save significant administrative costs. Individuals would, however, receive a report of health services provided during the year (a T-H form) to determine their contribution. Governments could allow people to pay their contributions in quarterly installments, an option that would reduce the size of any one payment but add administrative costs. Provincial health authorities do not currently provide such information to users of the health care system, so new administrative expenses would be incurred. Prices of services would need to be determined — something that is not always possible. Nevertheless, if governments did provide such information, the benefits would be significant: greater accountability on the part of providers, and greater awareness on the part of users.

Qualifying services. Instead of applying our system to every health expenditure, governments could use it for certain services that are easy to price, exhibit greater

Health care benefits funded by our copayment scheme could include consultations, less expensive, nonthreatening surgical procedures, and prescription drugs.

elasticity of demand, and perhaps are routine in nature. Thus, health care benefits funded by our copayment scheme could include consultations, less expensive, nonthreatening surgical procedures, and prescription drugs. One could exclude catastrophic expenditures from the list of benefits subject to tax, as well as procedures for early detection and prevention of illness. If only some services were subject to the copayment system, a higher recovery rate of costs (say, 100 percent rather than 40 percent) could be subject to the income limitation. Fewer people would likely be subject to the income limitation, especially in the middle- and upper-income groups.

Medical expense credit. Our proposal does not include any adjustment to the medical expense credit. In principle, one could view the contribution individuals would pay as just another medical premium that would be eligible for the medical expense credit. Thus, for anyone with medical expenditures greater than 3 percent of income, a credit could reduce the cost of the contribution. Leaving revenue considerations aside, one could view our proposal as a substitute for current revenues (such as PITs) that fund health care. Therefore, the contributions should not be viewed as a form of "private" medical expenditure, which would be eligible for the medical expense credit.

Private expenditures on health care. Our proposal should not be viewed as a substitute for other schemes, including the private provision of health care. It is meant only to improve the efficiency and fairness of the tax system by funding public, not private, expenditures. One could, however, mesh this proposal with other health care reforms. For example, tax savings could be used to pay not only for private expenditures on health care but also for the contribution suggested here.

Children. In our basic proposal, the maximum amount families and individuals would contribute would depend solely on their income. Families with a greater number of children typically would have greater health care expenditures. Since fertility rates are already low, it might be wise to avoid adding still more to the cost of having children. Thus, the exemption amount for the income limitation could be increased according to the number of family members, including children.[22]

Conclusion

Our proposed contribution scheme for funding provincial and territorial health care expenditures has the potential to improve the efficiency and fairness of the tax system. As well, it could improve accountability and increase awareness of the costs and benefits of health care, thereby encouraging better use of resources. The contribution scheme, in which individuals and families would pay 40 percent of

22 The current income tax provides credits for an individual and spouse or equivalent-to-spouse. No credit is provided for children in a family. It would be appropriate to consider an exemption level for parents and children in our copayment scheme.

the cost of health care services to a maximum of 3 percent of income (in excess of $10,000), would ensure that no family bore an inordinate medical expense burden. The payment could be administered as part of the income tax system. Provincial health authorities would need to report family or individual benefits on a T-H form. The contribution could be collected when people filed their income tax return.

The revenues generated by health contributions (estimated at about $6.6 billion) could be used to reduce personal income taxes. Government savings from better use of health care services — which is estimated to be $6.3 billion — could accommodate other publicly funded health care priorities.

Table A-1: ***Average Health Care Use, by Age and Income Group, 1998***

Age Group	Income	Nights in Hospital, Nursing Home, Convalescent Home	Visits/Calls to Family Physician or General Practitioner
	($)	(number)	(number)
0 to 24	0–29,999	0.27	3.18
	30,000–49,999	0.41	2.97
	50,000–79,999	0.15	2.80
	80,000+	0.23	2.80
25–44	0–29,999	0.64	3.75
	30,000–49,999	0.23	3.02
	50,000–79,999	0.22	2.83
	80,000+	0.16	2.54
45–64	0–29,999	1.36	4.96
	30,000–49,999	0.75	3.46
	50,000–79,999	0.23	2.84
	80,000+	0.31	2.54
65+	0–29,999	3.24	5.51
	30,000–49,999	1.57	4.62
	50,000–79,999	2.09	5.84
	80,000+	1.10	4.31

Source: Statistics Canada, National Population Health Survey 1998, custom tabulations for the C.D. Howe Institute.

Table A-2: ***Average Annual Public Health Care Expenditures per Person, by Age and Income, 1998***

	Income			
Age Group	$0–29,999	$30,000–49,999	$50,000–79,999	$80,000+
	(dollars per person)			
0–24	830.5	1,042.7	574.7	710.3
25–44	1,511.9	738.8	710.8	575.6
45–64	2,881.5	1,672.2	725.0	817.0
65+	6,111.6	3,184.0	4,218.2	2,369.3

Sources: Statistics Canada, National Population Health Survey 1998, custom tabulations for the C.D. Howe Institute; authors' calculations.

Appendix: Methodology

Estimating total and typical contributions under our proposal was particularly complicated owing to the lack of detailed data on the cost of specific health services. Recognizing that these are broad estimates, we calculated the average cost per visit and per night, then allocated these costs according to usage rates.

The 1998 National Population Health Survey, a household survey conducted by Statistics Canada, provides the most reliable and detailed data on health care use by income and age. Table A-1 shows the average number of nights spent in hospitals, nursing homes, and convalescent homes; it also shows the average number of visits and calls, according to income and age, to family physicians or general practitioners in 1998. CIHI provides data on public expenditures by type, including expenditures on hospitals, other institutions, and physicians. We combined these data to approximate the annual public spending per person by income and age. The results are shown in Table A-2. These costs were then used as inputs to Statistics Canada's SPSD/M, in which we ran the simulations and produced the final estimations.[23] (For details on SPSD/M, see Bordt et al. 1990.)

The basic proposal we presented assumed that 40 percent of health care costs would be used to assess each family's contribution; the maximum that each family paid would then be based on its income. The choice of percentage cost share is arbitrary. Tables A-3 and A-4 show how changing the percentage (to 20 percent and 60 percent, respectively) changes the estimated contribution of each family.

23 Most tax revenue estimates presented in this *Commentary* were derived from Statistics Canada's Social Policy Simulation Database and Model, Release 8.0. Responsibility for the use and interpretation of these data is entirely that of the authors.

Table A-3: ***Health Care Contributions, by Census Family Category, Using a 20 Percent Cost Share Level***

Census Family Category	Net Family Income					
	Less than $10,000	$10,000–30,000	$30,000–60,000	$60,000–100,000	More than $100,000	All Income Groups
	A. Average Contribution per Family ($)					
Married couple with no children	0	316	411	283	280	316
Married couple with young children	0	352	596	538	571	506
Married couple with only older children	0	324	593	497	536	503
Married couple, at least one is elderly	0	308	938	1,209	883	665
Single-parent family with young children	0	267	477	364	363	184
Single-parent family with only older children	0	301	571	506	486	397
Unattached, nonelderly individual	0	213	187	143	136	129
Unattached, elderly individual	0	204	679	765	474	185
All family categories	0	261	515	498	494	335
	B. % of "Typical" Families Paying the Maximum					
Married couple with no children	100.0	89.4	4.3	0	0	27.8
Married couple with young children	100.0	95.1	16.1	0	0	26.6
Married couple with only older children	100.0	94.7	21.2	0	0	17.7
Married couple, at least one is elderly	100.0	100.0	86.6	20.3	0	80.5
Single-parent family with young children	100.0	88.1	7.2	0	0	74.7
Single-parent family with only older children	100.0	91.8	14.4	8	0	48.2
Unattached, nonelderly individual	100.0	59.2	0	0	0	57.4
Unattached, elderly individual	100.0	99.9	10.4	0	0	88.8
All family categories	100.0	84.0	18.0	1.5	0	49.6

Notes: For the definition of a "typical" family, see the text.
Source: Authors' calculations.

Table A-4: ***Health Care Contributions, by Census Family Category, Using a 60 Percent Cost Share Level***

Census Family Category	Net Family Income					
	Less than $10,000	$10,000–30,000	$30,000–60,000	$60,000–100,000	More than $100,000	All Income Groups
			A. Average Contribution per Family ($)			
Married couple with no children	0	331	850	848	866	677
Married couple with young children	0	354	1,046	1,556	1,712	1,099
Married couple with only older children	0	327	1,069	1,482	1,609	1,244
Married couple, at least one is elderly	0	308	968	1,912	2,631	840
Single-parent family with young children	0	281	856	1,091	1,089	292
Single-parent family with only older children	0	309	921	1,306	1,459	683
Unattached, nonelderly individual	0	280	518	428	407	242
Unattached, elderly individual	0	204	922	1,685	1,422	234
All family categories	0	286	879	1,328	1,479	641
			B. % of "Typical" Families Paying the Maximum			
Married couple with no children	100.0	100.0	49.2	0	0	46.9
Married couple with young children	100.0	100.0	91.0	20.1	0.6	62.8
Married couple with only older children	100.0	100.0	76.5	5.8	0	35.8
Married couple, at least one is elderly	100.0	100.0	100.0	91.0	11.4	95.2
Single-parent family with young children	100.0	100.0	76.3	2.1	0	91.2
Single-parent family with only older children	100.0	100.0	76.1	20.6	0	75.5
Unattached, nonelderly individual	100.0	93.1	17.9	0	0	74.1
Unattached, elderly individual	100.0	100.0	100.0	79.4	0	99.0
All family categories	100.0	97.8	67.8	17.9	1.0	70.9

Notes: For the definition of a "typical" family, see the text.
Source: Authors' calculations.

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